DOCUMENT RESUME

ED 477 819 CE 085 025

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TITLE	Shaping Postsecondary Transitions: Influences of the National Academy Foundation Career Academy. IEE Brief.
INSTITUTION	Columbia Univ., New York, NY. Inst. on Education and the Economy.
REPORT NO	IEE-29
ISSN	ISSN-1059-2776
PUB DATE	2003-04-00
NOTE	5p.; Supported by the National Academy Foundation.
AVAILABLE FROM	For full text: http://www.tc.columbia.edu/~iee/BRIEFS/Brief29.pdf.
PUB TYPE	Collected Works - Serials (022) -- Information Analyses (070) -- Reports - Evaluative (142)
JOURNAL CIT	IEE Brief; n29 Apr 2003
EDRS PRICE	EDRS Price MF01/PC01 Plus Postage.
DESCRIPTORS	Academic Achievement; *Articulation (Education); *Career Academies; Career Education; *Career Planning; College School Cooperation; Educational Attainment; Educational Planning; Educational Research; Employee Attitudes; Employer Attitudes; Graduate Surveys; Job Training; *Outcomes of Education; *Program Evaluation; *School Business Relationship; Secondary Education; Teacher Attitudes; Transitional Programs; Vocational Education

ABSTRACT

To assess the impact of the National Academy Foundation (NAF) career academy (CA) model, a large-scale, multi-site evaluation was undertaken. Survey and interview data on program experiences and postsecondary outcomes were analyzed from nine CA programs. The study used pre-post evaluation of student data, field visits, and written and telephone surveys. It drew on data for 199 graduating CA seniors and a comparison group of 190 non- CA seniors; survey data for 157 alumni who had graduated from 9 long-standing NAF-affiliated CAs 5 and 10 years before the study; survey data for 34 CA and 26 non-CA teachers; and survey data for 192 employees. Findings include the following: (1) the program impacts students positively by providing a quality experience they find beneficial and by engaging them in schooling, but it neither adds to nor detracts from their overall academic achievement; (2) as measured by their college enrollment and completion, improved career aspirations, and employment outcomes, the program positively impacts students' postsecondary transitions; (3) for teachers, the CA model challenges them to think differently about their work with students, their teaching, and their work with one another; (4) CAs provided a structured avenue for strategic and substantive employer participation. (Contains 18 references) (YLB)

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INSTITUTE ON EDUCATION AND THE ECONOMY
IEE BRIEF

ISSN 1059 2776
Number 29 / April 2003

ED 477 819

Shaping Postsecondary Transitions: Influences of the National Academy Foundation Career Academy

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A confluence of educational issues and policy developments has brought renewed emphasis on efforts to improve adolescents' transitions to further education and careers. With raised academic expectations for all students and an economy that requires a more highly skilled labor force, more students are graduating from high school and enrolling in college. Yet many come under-prepared, flounder, and drop out, due in large part to inadequate high school coursework and insufficient college preparation (Adelman, 1999).

Since the National Commission on Excellence in Education (1983) called for higher academic standards, educators have looked for ways to increase high school performance levels, particularly among those who were not traditionally viewed as college-bound. More recently, educators have become particularly concerned with students' poor engagement in their senior year (The National Commission on the High School Senior Year, 2001).

The high school has become increasingly criticized for its inadequate curriculum content, organization, and focus (American Youth Policy Forum, 2000; Education Trust, 2001). Some critics have questioned the nature and content of teaching—as hindering rather than enhancing student learning because of a reliance on a narrow range of teaching strategies and de-contextualized content—and high schools' limited relationships with business and industry. Among the strategies thought to facilitate high school student learning are small schools (Lee & Smith, 1995) and academic curriculum linked to real-world experiences (Resnick, 1987).

Career academies have considerable potential: they use career planning and exposure to increase students' engagement in schooling, while sharpening students' preparation for college and careers. The emphasis on academics through an integrated and contextualized curriculum can improve students' learning, while work-based learning and business involvement enrich and diversify students' high school experience. The career academy's partial school-within-a-school design creates a more intimate learning environment. The career academy model has spread rapidly over the past 20 years and is now being promoted as an integral part of many high school reforms (McPartland et al., 1998).

Although there is evidence of its impact as a quality high school experience (Kemple, 1997; Orr et al., 1987; Orr & Fanscali, 1995), limited and somewhat contradictory research exists on the model's effectiveness in facilitating quality postsecondary transitions. Some research has pointed to post-high school success (Maxwell, 2001; Orr, 1990; Orr & Fanscali, 1995). However, Manpower Demonstration Research Corporation's (MDRC) methodologically rigorous random-assignment study of nine academies found little impact on participants' high school graduation and initial college-going rates—they and their comparison group had similar, high rates (Kemple & Snipes, 2000).

One particular model of career academy, sponsored by the National Academy Foundation (NAF), embodies all the key features thought to define a successful career academy—contextualized academics and applied coursework, student internships, business and industry participation, and an emphasis on college and career planning within the industry's field—and therefore may provide better postsecondary outcomes than might exist for more typical career academies. NAF provides curricular support, professional development, and technical assistance to a national network of high school academies of finance, travel and tourism, and information technology.

Study Methodology

To assess the impact of the NAF career academy model, a large-scale, multi-method, multi-site evaluation was undertaken by the Institute on Education and the Economy, from spring 2000 through summer 2001, at the request of NAF. Survey and interview data on program experiences and postsecondary outcomes were compiled from ten[1] career academy programs.

The study used a mixed methodology, including pre-post evaluation of student data, field visits, and written and telephone surveys. The research was limited to well-implemented, long-standing programs. The study was designed to determine whether and to what extent career academies shape students' experiences while in high school and facilitate their transitions to college and careers. The researchers also wanted to see how the program's philosophy, design, and operations yielded benefits for teachers and participating employers.

The study drew on survey and transcript data for 199 graduating career academy seniors and a comparison group of 190 graduating non-academy seniors; survey data for 157 alumni who had graduated from nine long-standing NAF-affiliated career academies five and ten years before the study began; survey data for 34 academy teachers and 26 non-academy teachers; and survey data for 192 employers.

The study used comparison groups selected from the same schools and among seniors who were not affiliated with career-focused programs or other specialized academic programs. Statistical analysis of the academy and comparison seniors showed that, among personal demographics and risk factors commonly associated with educational outcomes, the two samples differed only on the measure of parents' educational attainment, with the academy students' parents having slightly more education. Analysis of the two groups' GPAs at the time of enrollment found that on this measure the academy students were slightly advantaged as well. There was no difference in the two samples' attendance rates. The academy sample was only somewhat more likely to be interested in the career field or in a better educational experience. The two teacher groups had similar demographic and teaching characteristics, although the academy teachers were somewhat more likely to be male and nonwhite than were the non-academy teachers.

The Career Academy as a Learning Experience

To enroll students in NAF career academies, program staff actively recruit students from their classes, encouraging those who might need a "hook" to stay in

[1] *Due to the refusal of officials in one school to provide a comparison sample, only nine sites were used in the analysis.*

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school or who could benefit from a career-focused program of study, but who are not necessarily college-bound.

Most students at NAF-supported career academies have four or more core academy courses during their junior and senior years, a computer or technology course, a paid six-week summer internship with a private company, a college-level course, and a variety of industry exposure and college and career planning activities. In contrast, few comparison seniors had such experiences, except for computer technology courses.

The internship, the program's cornerstone, is typically six to eight weeks of paid summer work in a private industry-affiliated company. Sixty-five percent of the academy seniors (and 84 percent of the alumni) had a paid, program-related summer internship, while only 8 percent of comparison seniors did. Typically the career academy internships were of high quality, with several attributes that distinguish them from typical after-school work: most NAF career academy students spent some time in training at their internship, were supervised by school staff, had a designated work site supervisor and, for many, a workplace mentor.

Academy seniors also had a variety of work-based learning experiences and co-curricular activities to help them learn about the industry, explore careers, plan for college, and develop their social and interpersonal skills. They were much more likely than the comparison seniors to talk about colleges in class, learn about financial aid, and visit colleges. Academy seniors were significantly more likely than other seniors to plan for work after high school, to secure a job offer by graduation, and much more likely to participate in career exploration activities, job fairs, mentoring relationships, and practice interviews.

How the Career Academy Program Impacts Students in School

The research found that the program impacts students positively by providing a quality experience that they find beneficial and by engaging them in schooling, but it neither adds to nor detracts from their overall academic achievement.

First, academy seniors rated their courses significantly higher than did other seniors for contextualizing the subject matter, supporting student learning, incorporating college and career planning, and being more interesting than other academic classes.

Second, the majority of academy seniors rated their academy experience as highly beneficial academically and in planning for careers. Consequently, most academy seniors felt that they were more prepared for their future than their non-academy friends because of these experiences. Most alumni reported similar assessments, crediting the program for improving their workplace and other interpersonal skills and motivating them academically.

Third, the academy seniors and alumni agreed that their academy experience influenced their career plans: for seniors, it helped them prepare for a career in the field (82 percent), caused them to seek a challenging career path (75 percent), and generally interested them in a career in the field (69 percent). Most alumni (90 percent) agreed that their career academy experience helped them develop their career plans in the academy field or a related area. For many, the academy experience was a pivotal influence on their career direction.

Fourth, the program fostered a supportive learning environment for students through its school-within-a-school organization and thematic focus. Academy seniors were more likely than other seniors to feel motivated by and engaged in schooling, and improved their school attendance more during high school than did other seniors.

Academy seniors had better initial GPAs than did the comparison seniors and did not change this average significantly by their senior year, despite the possible distraction of the work experience and demanding college course.

The Impact of the Career Academies on Transitions to College and Careers

As measured by their college enrollment, completion, improved career aspirations, and employment outcomes, the program positively impacted students' postsecondary transitions. Academy seniors took several measures to prepare for college, and significantly more so than comparison seniors, such as completing at least one college-level course and engaging in college planning actions. By the time they were graduating, 77 percent of the academy seniors and 64 percent of the comparison seniors planned to go to college after high school and had already been accepted.

Even when we took into account factors such as gender, race, geographic mobility, parents' educational attainment, advanced academic high school course taking, and initial GPA for the academy and non-academy groups, we found that the academy affiliation independently influenced whether students had planned for and been accepted into a four-year college. Much of this is attributable to the Finance Academy seniors, however, since Travel and Tourism Academy seniors were as likely as the comparison seniors to be planning to work or enroll in a two-year college.

Many program alumni followed through on these positive starts by completing a two-year or four-year college degree within five to ten years. Fifty-two percent of the ten-year alumni and 44 percent of the five-year alumni had completed a four-year degree. Forty-five percent of those with degrees (either two-year or four-year) had earned them in fields related to their academy industry. Moreover, while 20 percent of all first-time college goers reported needing remedial coursework (National Center for Education Statistics, 1998), only 8 percent of the academy alumni did.

Finally, the academy experience positively influenced the participants' employment aspirations and outcomes. The career academy seniors' interest in the academy industries increased significantly during their program years, particularly for travel and tourism seniors. Only some career academy seniors had been interested in their academy's industries when they started, but by the time they graduated, the percentage interested had doubled. The majority of graduating academy seniors planned to combine work and college after high school graduation, and most alumni had. Twenty-six percent of the graduating seniors had plans to work for their internship employer or other academy-affiliated employer in the summer or fall after high school.

Most working alumni appeared to be in career-track positions five and ten years after graduating. Eighty-five per-

cent were working and most were in a professional field. Most of the alumni were satisfied with their current job based on a wide range of job satisfaction characteristics, including its field, the nature of the work, pay, benefits, importance, challenge, security, permanence, and opportunities for advancement.

Many alumni were working somewhat or directly in their academy-affiliated field, and 8 percent of working alumni were still with their original internship employer or one that was academy-affiliated.

How the Program Benefits Teachers

For teachers, the career academy model challenges them to think differently about their work with students, their teaching, and their work with one another. NAF sponsors a national professional development conference, provides contextualized curriculum, and facilitates local business affiliation to engage teachers in the underlying ideas and philosophy of the academy approach. The conference exposes teachers to new ideas and practices from other settings, connects them with teachers from other schools, and engages them in non-school-based learning experiences. The program's thematic focus, cohort structure, and partial school-within-a-school organization encourage teacher collaboration, making it a more supportive work environment.

According to survey information, the career academy teachers have been with their academy for several years. In six sites, the teachers taught part-time in the program; in the other three sites, they were exclusively with the program. Almost all were committed to the academy philosophy and approach, but only some relied on the NAF curriculum almost exclusively in their academy courses. Most reported using an applied curriculum approach, project-based instruction, and career exploration activities in their academy classes, as recommended by NAF. Most believed that they created a supportive learning environment for their students and for one another.

About half the teachers met together at least monthly, often focusing on instructional strategies and individual students. The majority of teachers had attended at least one NAF conference in the last ten years, and almost all who attended agreed these were effective. For some, these conferences were integral to their teaching—by motivating, inspiring, and building a network. The majority of teachers reported using some business support, through consultation, advice, and training.

By working with a small group of students—whom they often taught several times—teachers developed more supportive relationships with them, reinforcing their commitment to the program, and enhancing their satisfaction in teaching.

How the Program Benefits Employers

Career academies, particularly those affiliated with NAF, also provide a structured avenue for strategic and substantive employer participation. Even with the stress on employer participation in schools through the School-to-Work Opportunities Act, there has been skepticism over the potential for widespread employer involvement in high school programs. Some researchers (Bailey, 1995) have argued that it would be difficult to sustain large-scale employer participation simply for philanthropic reasons. Our research suggests that intermediary organizations, such as NAF, can facilitate schools' relationships with employers.

NAF encourages its local program affiliates to recruit businesses for program advisory boards, which in turn can facilitate internships, career exploration activities, teacher professional development, and other kinds of instructional support. According to employer interviews, the nine long-standing programs that we studied have attracted well-established private sector firms within their respective industries, while internship programs generally rely on nonprofit and governmental placements (Bailey, Hughes, & Barr, 2000).

These employers—at the nine long-standing programs—created quality internships in their firms and elsewhere, provided direct and indirect financial assistance, advised on curriculum, and advocated for the program with the school district. The employers averaged five interns per summer—which contrasted sharply to more typical work-based learning programs in which employers usually averaged one or two interns at a time (Lynn & Wills, 1994)—and offered good wages, averaging 30 percent more than minimum wage. Most enhanced the internship experience with mentoring, opportunities to learn about the industry, and job rotations, creating a higher quality experience than is typical (Kemple & Snipes, 2000).

Most employers reported that they were initially motivated primarily by a desire to contribute to education and the community. But the strongest incentive for their continued participation seems to be the quality and effectiveness of the interns. Employers rated the interns' skills as equal to or better than their entry-level employees. For some employers, the program has become a pipeline for quality employees, with half reporting that they have offered students permanent positions right after high school. Finally, almost all agreed that their commitment would remain strong in the future, and that they plan to continue as internship sponsors.

Conclusions

From the various debates in recent years about high schools, three converging objectives for transitioning adolescents have emerged: improve their academic skills and performance, increase college-going and college completion, and shorten the floundering period between high school completion and quality employment. Many high school reform recommendations underscore features that are typical for career academies, particularly the NAF-supported ones: creating a small, more intimate learning community; using thematic, contextualized, and challenging curriculum; incorporating student-centered instructional practices; and engaging learning resources from businesses and the community at large.

Until now, limited evidence existed on whether these features, if implemented well, actually yielded the hoped-for outcomes of improved student transitions into and through college and into quality employment. The evidence shown here clearly demonstrates that the NAF-affiliated career academies created a distinguishable experience for participating students. The evidence from this study also demonstrates the value of sustaining an enriched high

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school experience that encompasses the workplace as well as the school, is supportive for both students and teachers, and provides a challenging, thematic focus for both teaching and student learning.

The NAF-affiliated academies serve a cross-section of student abilities and interests. They encourage all students to be well prepared for college and develop a strong interest in a career field. These academies improved students' engagement in school and their ability to be successful in college and move into quality employment. The strongest results were from the alumni's current employment, which for most was of high quality, fitted well with their long-range career goals, and, for many, was in a field that related directly or indirectly to their academy's industry.

NAF's organizational structure seems to contribute significantly to overall model fidelity in the local sites, and to successful employer involvement and quality teacher preparation. NAF personnel guide local program staff in their recruitment of and relationships with local employers. For teachers, NAF provides structured ways to engage with other teachers in improving their teaching craft, focusing their work, and infusing college and career preparation in their work with high school students. NAF's emphasis on the core program features and on employer and teacher resources seems to encourage sustained program quality, which in turn contributes to students' success.

While positive, these outcomes must be interpreted cautiously. The study is only of program completers, and the comparison group was not randomly selected but chosen as average seniors without a career-program experience. Comparisons of academy and other seniors showed them to be similar on most demographic and risk factors, but the academy seniors had slightly better GPAs when enrolling in the academy than their comparisons. Thus, some positive results may be due to these initial differences or other unaccounted-for factors. Nonetheless, this research shows that the career academy is a viable educational experience that improves students' engagement in high school and facilitates effective transition to further education and careers.

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This Brief was developed at the Institute on Education and the Economy, Teachers College, Columbia University. It was drawn from a longer paper, *Shaping Postsecondary Transitions: The Influence of the Career Academy Experience—The National Academy Foundation Story,* which is available from IEE. The research was conducted with support from the National Academy Foundation (NAF).

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